



Partner Reported Opportunities (PROs)
For Reducing Methane Emissions

Compressors/Engines ☐
Dehydrators ☐
Pipelines ☐
Pneumatics/Controls ☐
Tanks ☐
Valves ☒
Wells ☐
Other ☐

Design Isolation Valves to Minimize Gas Blowdown Volumes

Applicable sector(s):

☐ Production ☐ Processing ☒ Transmission and Distribution

Partners reporting this PRO: Iroquois Gas Transmission

Other related PROs: Move Fire Gates In to Reduce Venting at Compressor Station, Inject Blowdown Gas into Low Pressure Mains, Redesign Blowdown Systems and Alter ESD Practices

Technology/Practice Overview

Description

When individual compressors or other equipment in a compressor station are taken out of service, valves are closed and the natural gas between the valves is vented to the atmosphere. Through an improved compressor facility design, one partner has reported reducing the volume of gas emitted when sections of isolated equipment are blown down.

To implement this strategy, the partner has designed new compressor stations with isolation valves positioned in closer proximity to compressors. Due to this design alteration, when the valves are closed, significant lengths of gas-filled piping will not be vented to the atmosphere, thereby reducing methane emissions.

Principal Benefits

Reducing methane emissions was:

☒ **A primary justification for the project** ☐ **An associated benefit of the project**

Operating Requirements

There are no changes in operating requirements.

Applicability

This practice can be implemented in new station designs or existing station renovations.

Methane Savings

130 Mcf/yr

Costs

Capital Costs (including installation)

☐ < \$1,000 ☒ \$1,000-\$10,000 ☐ > \$10,000

Operating and Maintenance Costs (Annual)

None

Payback (Years)

☐ 0-1 ☐ 1-3 ☒ 3-10 ☐ > 10

Methane Emission Reductions

Methane emission reductions are estimated from the length, size and operating pressure of piping excluded from the isolation loop by the new location of isolation valves.

Economic Analysis

Basis for Costs and Savings

Methane emission reductions of 130 Mcf/yr are associated with the relocation of two compressor station isolation valves to exclude 200 feet of 24-inch pipeline at 600 psig from being blown down five times per year.

Discussion

Alterations of or additions to the isolation valves at a compression station involves engineering and construction costs, which if aimed at minimizing gas blowdown, would be offset by gas savings.